

**DYNAMIC BANDWIDTH ALLOCATION FOR MULTIPLE ACCESS
COMMUNICATIONS USING BUFFER URGENCY FACTOR**

Abstract of the Disclosure

A base station provides wireless communication of digital signals over digital communication paths, with the digital signals being communicated using radio frequency channels via Code Division Multiple Access (CDMA) modulated radio signals. The base station includes a wireless transceiver for establishing communication sessions over the digital communication paths, and buffers for storing data to be transmitted by the wireless transceiver. Each buffer is associated with a particular digital communication path and has a threshold associated with a level of data stored therein. A transmission processor allocates code channels within the radio frequency channels to transmit the stored data during the communication sessions. A channel resource assignor connected to the transmission processor monitors a level of data stored in each buffer and computes an urgency factor for each buffer based upon the threshold associated therewith. The urgency factor represents a relative need for transmitting the stored data over the particular digital communication path associated with that buffer. The channel resource assignor compares the computed urgency factors for buffers for determining how many code channels are to be allocated to each digital communication path.